

Title: Beamline Facilities Review

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Policy

To enhance the safety of beamline facility operations, each beamline, and associated facilities (office areas, control areas, labs, experiment equipment with engineered safety controls, etc.), and experiment safety program will be reviewed for meeting APS/ANL safety standards on a periodic basis. The review will be conducted by the User Safety Officer (USO) and coordinated with the Sector Review Panel schedule. The review committee will report its findings to the APS-AES Division Director. A summary of the review will be provided to the APS Deputy ALD for X-ray Science for use with the sector review.

Procedure

1 Introduction – Purpose, Scope, and Applicability

The APS has established this review process to verify that all APS beamline facilities are safe and meet APS/ANL safety standards. This procedure describes the beamline safety program assessment that is conducted on every beamline every three years.

2 Preparation - Prerequisite Actions

The USO chairs the review and appoints a review committee that includes the Critical Components System Manager (CCSM), the User Technical Interface, AES ES&H Coordinator and others as appropriate to the beamline's program and facilities.

The USO notifies the CAT/CDT/XOR Director of the beamline review, provides guidelines for a 30 – 45 minute presentation by the beamline management, and requests that they arrange for the presentation and facility inspections.

3 Acceptance Criteria

The review is completed with the acceptance of the report by the APS-AES Division Director.

4 Procedure Action Steps - Performance

- 4.1 The beamline management provides the 30 – 45 minute summary and status report of the beamline and experiment safety program and notes changes in the beamline since the last design review.
- 4.2 The committee will verify that a current safety plan is in place and that it is consistent with the current scope of beamline activities.
- 4.3 The AES ES&H Coordinator will provide the USO with recent ES&H inspection reports and identify open safety issues.
- 4.4 The review committee will verify that the APS has safe operations beamline records on file and that they are consistent with the beamline as-built conditions. Typically, records reviewed include:
 1. Beamline/sector layout,
 2. Synchrotron and bremsstrahlung raytraces,
 3. Shielding component designs (e.g., assembly drawings that show component functionality for shutters and stops and critical dimensions),
 4. PSS operations records (e.g., User Requirements Document),
 5. Shielding designs, and
 6. Safe operations envelope (e.g., maximum beam current or minimum gap limits).
- 4.5 The committee will conduct the inspection of beamline and associated facilities (including LOM labs and other beamline managed areas) and review beamline sector records (safety plans, recent ES&H inspection reports, etc.).
- 4.6 The USO reports preliminary findings of the review panel to the beamline management for correction, comment, or prompt mitigation of identified problems. The report may include notable safety practices found on the beamline, opportunities for safety enhancements, and findings of deficiencies where the beamline operations have not met APS/ANL safety standards.
- 4.7 The USO prepares the final review report. The report may reflect remedial work promptly undertaken by the beamline management and brought to the Chair's attention.
- 4.8 The USO forwards the final report to the AES Division Director and copies the CAT/CDT/XOR Director and the APS Deputy ALD for X-ray Science.